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33. MANGROVE CLAM *GELOINA EROSA* (SOLANDER, 1786) FROM CORINGA (GODAVARI) ESTUARY: A NEW RECORD FOR ANDHRA PRADESH

During a faunistic survey of Coringa (Godavari) estuary (c. 16° 30'-17° 00' N and 82° 14'-82° 23' E) in August 1999, 3 molluscan shells were collected which were identified as *Geloina erosa* (Solander 1786). The mangroves *Avicennia marina*, *Exoecaria agallocha* and *Sonneratia apetala* dominate the habitat from which the shells were collected. The antero-posterior axis of the shell (bearing a distinct flexure extending from the umbo to the mid-posterior margin) ranged between 52 and 68 mm.

This species was reported as common along the mangroves of the Indian Ocean, extending its range further east into the Pacific Ocean (Prashad 1932). The information about its distribution in Indian waters is limited. Specimens were collected in the past from False

Point, Andaman and Nicobar Islands, Mahanadi river (Mitra pers. comm.) and the Mandovi estuary (Ingole et al. 1994). The species has not been recorded from Coringa (Godavari) estuary and thus, constitutes a new record.

I thank Mr S.C. Mitra of the Mollusca Division, Zoological Survey of India, Kolkata for information on the distribution of the species and the Head, Department of Zoology, Osmania University for facilities. I acknowledge a Senior Research Fellowship from CSIR, New Delhi.

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34. TWO NEW PLANT RECORDS FOR INDIA FROM SIKKIM

(With two text-figures)

Botanical explorations undertaken in the state of Sikkim since 1980 have resulted in a collection of more than 19,000 field numbers in

the Herbarium of Sikkim Himalayan Circle, Botanical Survey of India, Gangtok. Study of some of these collections, resulted in identifying

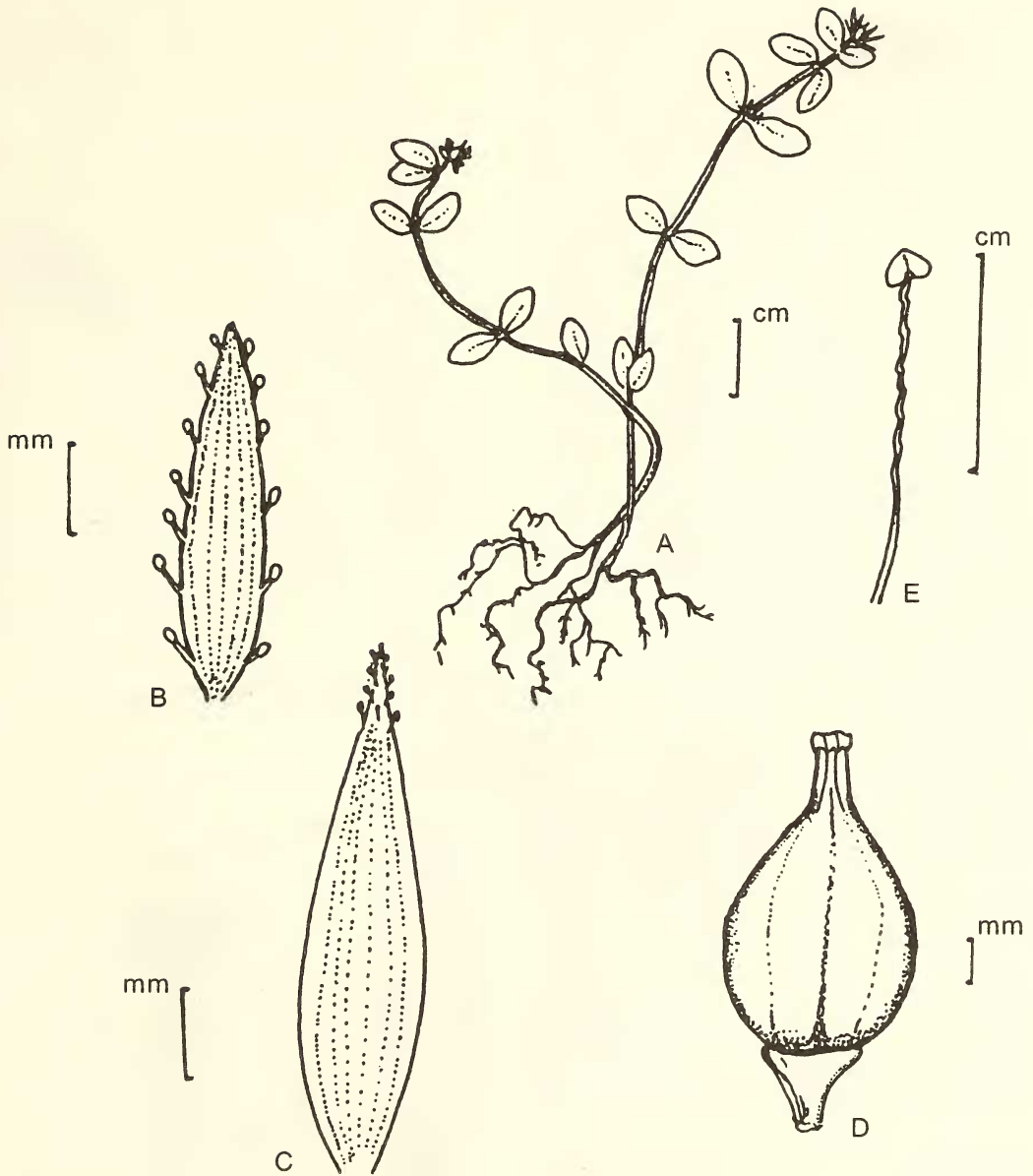


Fig. 1: *Hypericum ludlowii* N.B.K. Robson, A. Habit; B. Sepal; C. Petal; D. Gynoecium; E. Stamen

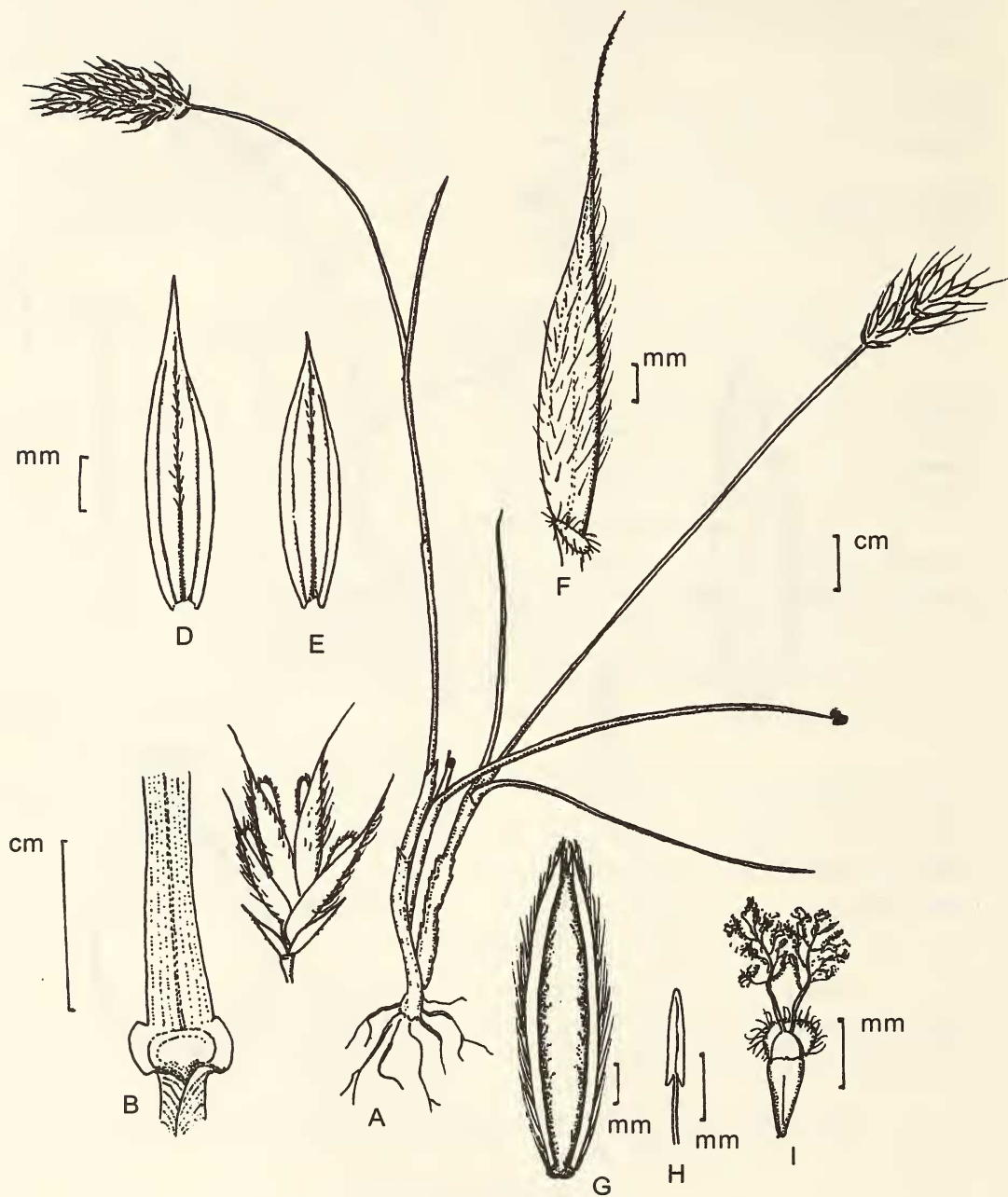


Fig. 2: *Elymus thoroldianum* (Oliver) G. Singh, A. Habit; B. Auricles; C. Spikelet; D. Lower glume; E. Upper glume; F. Lemma - lateral view; G. Palea; H. Stamen; I. Gynaecium

two plants not known earlier from India. The two species are reported, described and illustrated here. The herbarium specimens are deposited in the Herbarium, Sikkim Himalayan Circle, BSI, Gangtok, (BSHC).

1. *Hypericum ludlowii* N.B.K. Robson in Notes Roy. Bot. Gard. Edinburgh 41(1). 133. 1983. (Hypericaceae). Fig: 1.

Suberect herbs up to 10 cm high; stems terete, unbranched. Leaves opposite, up to 1 x 0.5 cm, oblong-ovate, rounded at base, entire at margins, obtuse at apex, glabrous above, puberulous and gland-dotted beneath. Flowers solitary, terminal, up to 7 mm across, bisexual, yellow, pedicels c. 2 mm long, glabrous. Sepals 5, c. 4x1 mm, linear-lanceolate, glandular-ciliate, acuminate at apex. Petals 5, c. 6x1.5 mm, lanceolate, entire at margins, acuminate at apex, glandular hairy near apex. Stamens 12, c. 6 mm long, anthers dorsifixed. Ovary ovoid, c. 4 mm across, styles 3-4, connate, c. 2 mm long stigma capitate. Capsules not seen.

Specimens examined: North Sikkim: Yumthang, 26.vii.1989, *N.R.Mandal* 10085 (BSHC).

Distribution: INDIA: Sikkim (New report), Bhutan, China (Tibet).

Notes: This species is closely related to *H. petiolulatum* Dyer, but is different in being (i) a sparsely branched herb (ii) leaves elliptic, subsessile (iii) flowers solitary and (iv) sepals glandular ciliate, whereas the latter is (i) a much branched herb with (ii) ovate leaves, shortly petiolate, petiole up to 4 mm long, (iii) flowers 1-3 and (iv) sepals entire at margin or with a few sessile glands, but never glandular ciliate.

2. *Elymus thoroldianum* (Oliver) G. Singh in Taxon 32 (4): 640. 1983. *Agropyron thoroldianum* Oliver in Hook, Ic. Pl. t. 2262. 1893; Bor, Grasses Ind. 667. 1960. (Poaceae). Fig:2.

Tufted perennials up to 20 cm high, culms glabrous. Leaf sheaths glabrous on margins; leaf

blades up to 8 cm long, herbaceous. Spikes up to 4 x 1.5 cm, golden yellow, dense; axis tough, continuous. Spikelets solitary at each node of the spike axis, 3-4 flowered, breaking at maturity. Glumes lanceolate; lower glume c. 5.5 x 1.5 mm, upper glume c. 5 x 1.5 mm, upper glume c. 5 x 1.5 mm, gradually tapering into a short awn at apex, coriaceous, 3-nerved, midrib pubescent. Lemma c. 8 x 3 mm, elliptic-lanceolate, 3-nerved, silky villous with scattered long hairs on the midrib; awn 4-5 mm long, scabrid. Palea c. 7 x 2 mm, elliptic, long ciliate on the keels. Stamens 3, c. 2.5 mm long, anthers c. 1.5 mm long. Ovary obovoid, c. 1.5 mm long, with a silky hairy appendage at apex; styles 2, stigma fimbriate.

Specimens examined: North Sikkim: Near Gurudongmar lake, 5,300 m above msl, 5.x.1997, *P.Singh & S.S.Dash* 20050 (BSHC).

Distribution: INDIA: Sikkim (new report), China (Tibet).

Notes: A rare grass, collected only from one site near the Indo-Tibetan border in Indian territory. It differs from other Indian species of *Elymus* in having spikelets solitary at each node, lemmas silky villous and anthers c. 1.5 mm long. This species was originally described under *Agropyron* from Tibet, but with the re-evaluation of generic limits in the tribe Triticeae, it is now placed under *Elymus*.

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